

Notice of Allowability

Application No.

09/692,342

Examiner

Mohammad A. Siddiqi

Applicant(s)

NORDSTROM ET AL.

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/18/2006.
2. ☒ The allowed claim(s) is/are 1-5,7-19,21-22 (rearrange claims are 1-20).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 07/22/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

JOHN FOLLANSBEE
SUPERVISORY PATENT
TECHNOLOGY CENTER

DETAILED ACTION

1. Claims 1-5, 7-19, and 21-22 are allowed.

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for Allowance:

Examiner finds Applicant's arguments submitted in the Appeal Brief filed on 11/18/2005 to be persuasive.

Regarding claim 1, none of the cited prior art references discloses or render obvious the claimed method for dynamically determining step, configuring network to provide OS support for component, when an OS supports only components within a partition among the one or more network-level partitions to which the OS is assigned, configuring process includes informing the OS assigned to a partition to which node belongs of the presence of the component and enabling OS and other support for component. These features are enabled at least on pages 19-27 (fig 8) of Applicant's specification.

Claims 2-5 and 7 depend from claim 1, and are thus allowed for the same reasons.

Claim 8 presents a system for performing the same method as claim 1 and is thus allowed for the same reasons.

Claims 9-13 depend from claim 8, and are thus allowed for the same reasons.

Claim 14 presents a network for performing the same method as claim 1 and is thus allowed for the same reasons.

Claims 15-16 depend from claim 14, and are thus allowed for the same reasons.

Claim 17 presents a computer program product for performing the same method as claim 1 and is thus allowed for the same reasons.

Claims 18-19 and 21-22 depend from claim 17, and are thus allowed for the same reasons.

3. Any comments considered necessary by applicant must be submitted no later than payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments Statement of Reasons for Allowance."

EXAMINER'S AMENDMENT

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview Mr. Eustace P. Isidore with on 08/02/2006.

5. Please amend the claims as attached.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A. Siddiqi whose telephone number is (571) 272-3976. The examiner can normally be reached on Monday -Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SENIOR PATENT EXAMINER
TECHNOLOGY CENTER 2100

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently amended) A method for configuring a network that includes one or more network-level partitions and at least one operating system (OS) assigned to each of said one or more network-level partitions, said method comprising the steps of:

 dynamically determining when a component is connected to a node of said network; and

 in response to said dynamically determining step, configuring said network to provide support for said component, wherein, when an OS supports only components within a partition among the one or more network-level partitions to which the OS is assigned, said configuring process includes informing the OS assigned to a partition to which said node belongs of the presence of the component and enabling OS and other support for said component;

wherein said configuring includes:

determining the partition of said network to which said component has been associated;

checking for subscribed consumers within the partition, said subscribed consumers including said one or more OS; and

notifying said OS of said component only when said OS is assigned to said partition or said OS has subscribed to be notified of new components and has correct access privileges for the partition in which the node exists, wherein each OS is provided predefined access privileges to particular ones of said one or more network-level partitions.

2. The method of Claim 1, further comprising the steps of:
 - registering the OS with a management system of said network, wherein said management system provides a notification to each registered OS whenever a new component is added to said node and detected by said management system; and
 - automatically alerting said OS via said management system that said component is added-to said node.
3. The method of Claim 2, wherein said dynamically determining step is completed by said management system and includes the step of monitoring a network via a periodic sweep operation for visible configuration changes that indicate presence of the component.
4. The method of Claim 2, wherein said network includes a switch mechanism and said dynamically determining step includes the steps of:
 - detecting an addition of said component to a link of said switch mechanism; and
 - in response to said detecting step, generating a trap message at said node and signaling said management system via the trap message that said component is connected to said network
5. The method of Claim 2 further comprising the steps of:
 - associating said component to at least one partition of said network from among the one or more network-level partitions;
 - assigning port attributes to said component; and
 - associating said component to at least one OS assigned to said at least one partition.

6. Canceled

7. The method of Claim 1, further comprising the steps of:
tracking components that are supported by the OS via a component table;

automatically updating the component table available to said OS with information about said component; and

providing OS support to all components registered in said component table.

8. (Currently amended) A system for configuring a network, said system comprising:

a network manager that dynamically determines when a component is added to a node of said network and configures said network to provide support for said component, wherein said network is a system area network (SAN) that enables user processes to bypass an OS kernel process and directly access network communication hardware; and

a network administration utility that, and in response to said network manager dynamically determining when a component is added, notifies an OS registered with said network administration utility that said component is added, wherein said OS updates required OS parameters to enable OS support of said component;

wherein said network administration utility notifies the OS via a sequence of operations including:

determining the partition of said network to which said component has been associated;

checking for subscribed consumers within the partition, said subscribed consumers including said one or more OS; and

notifying said OS of said component only when said OS is assigned to said partition or said OS has subscribed to be notified of new components and has correct access privileges for the partition in which the node exists, wherein each OS is provided predefined access privileges to particular ones of said one or more network-level partitions.

9. The system of Claim 8, wherein said network manager determines when said component is added by monitoring and periodically scanning said network for configuration changes.

10. The system of Claim 8, wherein said network manager determines when said component is added by receiving a packet from said component indicated that said component is present on said network.

11. The system of Claim 8, further comprising a registration table utilized by said OS for registering said OS for notification by said network administration utility of an addition of a component; and

12. The system of Claim 11, further comprising:

a partitioning mechanism that associates said component with one or more of a plurality of partitions of said network; and

wherein said network manager notifies said OS only when said OS is associated with a same one of said one or more partitions.

13. The system of Claim 12, further comprising a component registry available to said OS that is updated with information about said component

when said component is detected, wherein said OS provides support to all components registered in said component registry to which said OS has access privilege.

14. (Currently amended) A network comprising:

- a switch;

- at least one node linked to said switch for adding components;

- a network manager that dynamically determines when a component is added to said at least one node of said network and configures said network to provide support for said component, wherein said network is a SAN that enables user processes to bypass an OS kernel process and directly access network communication hardware;

- at least one operating system (OS); and

- a network administration utility that, and in response to said network manager, dynamically determining when a component is added, notifies an OS registered with said network administration utility that said component is added, wherein said OS updates required OS parameters to enable OS support of said component;

- wherein said network administration utility notifies the OS via a sequence of operations including:

- determining the partition of said network to which said component has been associated;

- checking for subscribed consumers within the partition, said subscribed consumers including said one or more OS; and

- notifying said OS of said component only when said OS is assigned to said partition or said OS has subscribed to be notified of new components and has correct access privileges for the partition in which the node exists, wherein each OS is provided predefined access

privileges to particular ones of said one or more network-level partitions.

15. The network of Claim 14, further comprising:

a partition agent that associates said component to one or more partitions of said network and controls access to said component via a partition monitoring function; and

wherein said OS is notified of said component only when said OS has an access permission to a same one of said one or more partitions.

16. The network of Claim 14, wherein said network is a system area network (SAN) that enables user processes to bypass an OS kernel process and directly access network communication hardware.

17. (Currently amended) A computer program product comprising:

a computer readable storage medium; and

program instructions on said computer readable medium for:

dynamically determining when a component is connected to a node of said network; and

in response to said dynamically determining step, configuring said network to provide support for said component, wherein an OS supports only components within a partition among the one or more network-level partitions to which the OS is assigned and said configuring process includes informing the OS assigned to a partition to which said node belongs of the presence of the component and enabling OS and other support for said component;

wherein said program instructions for configuring includes instructions for:

determining the partition of said network to which said component has been associated;

checking for subscribed consumers within the partition, said subscribed consumers including said one or more OS; and

notifying said OS of said component only when said OS is assigned to said partition or said OS has subscribed to be notified of new components and has correct access privileges for the partition in which the node exists, wherein each OS is provided predefined access privileges to particular ones of said one or more network-level partitions.

18. The computer program product of Claim 17, further comprising program instructions for:

registering the OS with a management system of said network, wherein said management system provides a notification to each registered OS whenever a new component is added to said node and detected by said management system; and

automatically alerting said OS via said management system that said component is added-to said node.

19. The computer program product of Claim 18 further comprising program instructions for:

associating said component to at least one partition of said network from among the one or more network-level partitions;

assigning port attributes to said component; and

associating said component to at least one OS assigned to said at least one partition.

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20. Canceled

21. The computer program product of Claim 19, further comprising program instructions for:

determining a partition of said network to which said component has been associated;

checking for subscribed consumers within the partition, said subscribed consumers including said one or more OS; and

notifying said OS only when said OS has access privileges for said partition and said component, wherein each OS is provided predefined access privileges to particular ones of said one or more network-level partitions.

22. The computer program product of Claim 21, further comprising program instructions for:

tracking components that are supported by the OS via a component table;

automatically updating the component table available to said OS with information about said component; and

providing OS support to all components registered in said component table.